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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,268	03/12/2004	Jac-scong Shim	1793.1202	5853
49455 7590 07/27/2007 STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			EXAMINER GIESY, ADAM	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 07/27/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/798,268

Applicant(s)

SHIM ET AL.

Examiner

Adam R. Giesy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 and 57-75 is/are pending in the application.
- 4a) Of the above claim(s) 7-18, 24-35 and 63-74 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 6, 19-23, 36, 37, 40, 57, 58, 61, 62 and 75 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 38, 39, 59 and 60 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 7-18, 24-35, and 63-74 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 6/1/2007.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 5, 6, 19-23, 36, 37, 40, 57, 58, 61, 62, and 75 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanoue et al. (hereinafter Tanoue – US Pat. No. 6,657,937 B2).

Regarding claim 1, Tanoue discloses an information storage medium in which data is recorded in recording units, each of the recording units comprising: a body including user data (see Figure 4, elements labeled 'GAP', 'GUARD1', 'VFO3', 'PS' and 'DATA') and a first recognizer ('PS'); and a head which is arranged in front of the body ('HEADER FIELD') and includes a second recognizer other than the first recognizer ('PID1' and 'PA'), wherein a number of maximum length patterns used to form the second recognizer is greater than a number of maximum length patterns used to form the first recognizer so that the second recognizer is distinguished from the first

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recognizer (Note that the PS field is only 3 bytes long while the PID1 and PA fields combine to be 5 bytes long).

Regarding claim 2, Tanoue discloses all the limitations of claim 1 as described in the claim 1 rejection above, and further the recording unit further comprises a tail which is arranged behind the body (see Figure 4, elements labeled 'PA3', 'GUARD2', and 'BUFFER') and includes a third recognizer ('PA3').

Regarding claim 5, Tanoue discloses all the limitations of claim 1 as described in the claim 1 rejection above, and further that the second recognizer is located in a rear part of the head (Figure 4, element 'PA3').

Regarding claim 6, Tanoue discloses all the limitations of claim 1 as described in the claim 1 rejection above, and further a mark or a pit with a specific length is repeatedly recorded for a length of a number of bytes in the head for a data phase locked loop (column 5, lines 27-30).

Regarding claim 19, Tanoue discloses an information storage medium in which data is recorded in recording units, each of the recording units comprising: a body including user data, an error correction parity, and an error correction code (ECC) sync (see Figure 4, elements labeled 'GAP', 'GUARD1', 'VFO3', 'PS' and 'DATA'; see also column 6, lines 17-23); and a head which is disposed in front of the body (Figure 4, 'HEADER FIELD'), wherein the head includes a head identifying pattern which is unique such that the head identifying pattern cannot be detected from any other patterns in the body ('PID1' and 'PA1').

Regarding claim 20, Tanoue discloses all the limitations of claim 19 as described in the claim 19 rejection above, and further that the head identifying pattern is disposed in a rear part of the head and comprises a head closing mark, which marks a closing of the head (Figure 4, 'PID1' and 'PA1').

Regarding claim 21, Tanoue discloses all the limitations of claim 20 as described in the claim 20 rejection above, and further that the head closing mark comprises more patterns than a number of maximum length patterns used to form the ECC sync so that the head closing mark is distinguished from the ECC sync (Figure 4, 'PID1' and 'PA1'; see also column 6, lines 17-23).

Regarding claim 22, Tanoue discloses all the limitations of claim 20 as described in the claim 20 rejection above, and further that each of the recording units further comprises a tail which is disposed behind the body (Figure 4, 'PA3', 'GUARD2', and 'BUFFER') and includes a tail opening mark, which marks a closing of the tail (PA3).

Regarding claim 23, Tanoue discloses all the limitations of claim 19 as described in the claim 19 rejection above, and further that a mark or a pit with a specific length is repeatedly recorded for a length of A number of bytes in the head for a data phase locked loop (column 5, lines 27-30).

Regarding claim 36, Tanoue discloses an apparatus for reproducing data recorded on a disk in recording units, each of the recording units comprising: a body including user data and a first recognizer; and a head which is disposed in front of the body and includes a second recognizer other than the first recognizer, wherein a number of maximum length patterns used to form the second recognizer is greater than

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a number of maximum length patterns used to form the first recognizer so that the second recognizer is distinguished from the first recognizer, the apparatus comprising: a pickup which detects a radio frequency signal from the disk (Figure 16, element 5); and a controller which controls the pickup and distinguishes the body from the head based on the first recognizer and the second recognizer (Figure 17, element 68).

Regarding claim 37, Tanoue discloses all the limitations of claim 36 as described in the claim 36 rejection above, and further that the recording unit further comprises a tail which is arranged behind the body (Figure 4, 'PA3', 'GUARD2', and 'BUFFER') and includes a third recognizer ('PA3').

Regarding claim 40, Tanoue discloses all the limitations of claim 36 as described in the claim 36 rejection above, and further that the second recognizer is located in a rear part of the head (Figure 4, 'PID1' and 'PA1').

Regarding claim 57, Tanoue discloses a method of recording data on a recordable information storage medium, the method comprising: recording data in recording units, wherein each of the recording units comprises: a body including user data (see Figure 4, elements labeled 'GAP', 'GUARD1', 'VFO3', 'PS' and 'DATA') and a first recognizer ('PS'); and a head which is disposed in front of the body ('HEADER FIELD') and includes a second recognizer other than the first recognizer ('PID1' and 'PA1'), wherein a number of maximum length patterns used to form the second recognizer comprises is greater than a number of maximum length patterns used to form the first recognizer so that the second recognizer is distinguishable from the first

recognizer (Note that the PS field is only 3 bytes long while the PID1 and PA fields combine to be 5 bytes long).

Regarding claim 58, Tanoue discloses all the limitations of claim 57 as described in the claim 57 rejection above, and further that each of the recording units further comprises a tail which is disposed behind the body (Figure 4, 'PA3', 'GUARD2', and 'BUFFER') and includes a third recognizer ('PA3').

Regarding claim 61, Tanoue discloses all the limitations of claim 57 as described in the claim 57 rejection above, and further that the second recognizer is located in a rear part of the head (see Figure 4, 'PID1' and 'PA1').

Regarding claim 62, Tanoue discloses all the limitations of claim 57 as described in the claim 57 rejection above, and further that a mark or a pit with a specific length is repeatedly recorded for a length of A number of bytes in the head for a data phase locked loop (column 5, lines 27-30).

Regarding claim 75, Tanoue discloses all the limitations of claim 57 as described in the claim 57 rejection above, and further that the user data is recorded in units of ECC blocks (see column 6, lines 17-23), the first recognizer is an ECC sync (see column 6, lines 17-23), the second recognizer is a head closing mark, which marks an end of the head (see Figure 4, 'PID1' and 'PA1'), and the third recognizer is a tail opening mark, which marks a start of the tail ('PA3').

***Allowable Subject Matter***

4. Claims 3, 4, 38, 39, 59, and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 3 is allowable over prior art of record which does not disclose or suggest all of the limitations of claim 1, as well as the further limitation that when a run length limited (1, 10) modulation code is used, the first recognizer uses a 12T pattern, and the second recognizer uses two 12T patterns.

Claim 4 is allowable over prior art of record which does not disclose or suggest all of the limitations of claim 1, as well as the further limitation that when a run length limited (1, 10) modulation code which modulates 8-bit data into a 12-bit codeword is used, the first recognizer uses a 13T pattern, and the second recognizer uses two 13T patterns.

Claim 38 is allowable over prior art of record which does not disclose or suggest all of the limitations of claim 36, as well as the further limitation that when a run length limited (1, 10) modulation code is used, the first recognizer uses a 12T pattern, and the second recognizer uses two 12T patterns.

Claim 39 is allowable over prior art of record which does not disclose or suggest all of the limitations of claim 36, as well as the further limitation that when a run length limited (1, 10) modulation code which modulates 8-bit data into a 12-bit codeword is used, the first recognizer uses a 13T pattern, and the second recognizer uses two 13T patterns.



Claim 59 is allowable over prior art of record which does not disclose or suggest all of the limitations of claim 57, as well as the further limitation that when a run length limited (1, 10) modulation code is used, the first recognizer uses a 12T pattern, and the second recognizer uses two 12T patterns.

Claim 60 is allowable over prior art of record which does not disclose or suggest all of the limitations of claim 57, as well as the further limitation that when a run length limited (1, 10) modulation code which modulates 8-bit data into a 12-bit codeword is used, the first recognizer uses a 13T pattern, and the second recognizer uses two 13T patterns.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Takana et al. (US Pat. No. 5,881,037) discloses a recording apparatus and reproduction apparatus that uses code words inside recorded user data.

b. Oki et al. (US Doc. No. 2002/0110071 A1) discloses discloses a recording apparatus and reproduction apparatus that uses code words inside recorded user data.

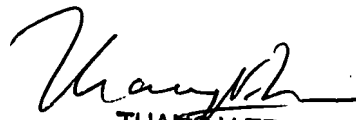
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne R. Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARG 7/22/2007



THANH V. TRAN  
PRIMARY EXAMINER